
Characteristics of perovskite solar cells (PSCs) prepared with chemical mechanical polished transparent electrode

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Silicon-based solar cells are known for the photovoltaic device due to high efficiency of approximately 25 % compared to other solar cells. Because they have disadvantages such as high production cost, organic materials based solar cell devices have been attracted for next generation solar cell with low cost production, light-weight, and flexible device applications. Organic materials based solar cells are usually fabricated by using spin coating method. On their fabrication process, the smooth status of surface between transparent electrode (Fluorine doped Tin Oxide, FTO) and Organic layers is needed to uniformly and widely cover films on the substrate [1-2].

In this study, perovskite solar cells (PSCs) are employed chemical mechanical polished FTO substrate for transparent electrode. Before PSC layer is coated on the FTO substrate, the surface of FTO substrate is smoothed by chemical mechanical polishing (CMP) process. We investigated the effect on status of substrate surface on the fabrication process.

Reference

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